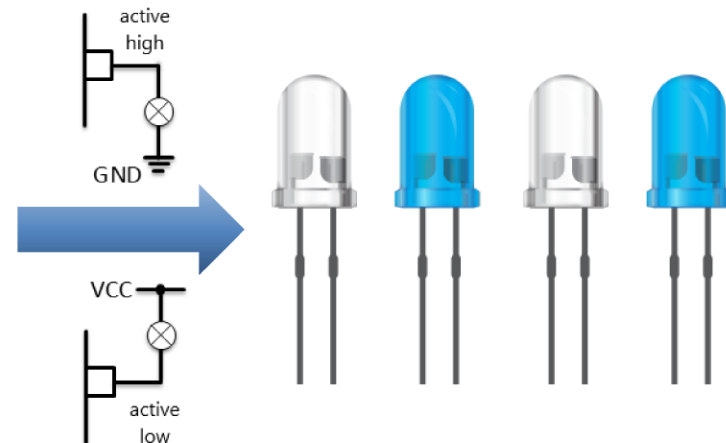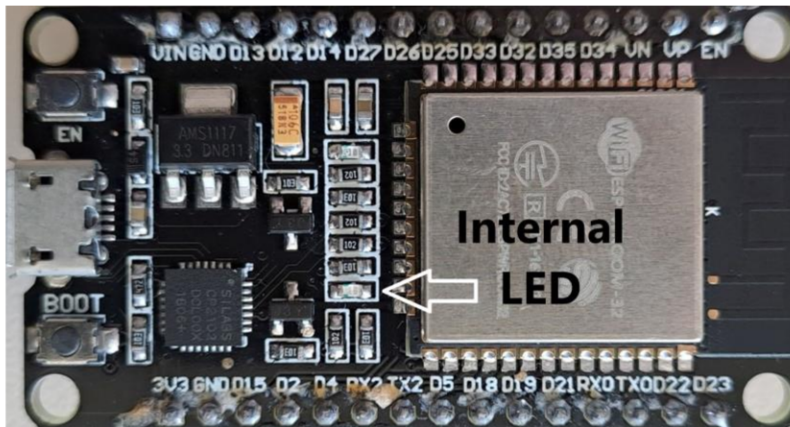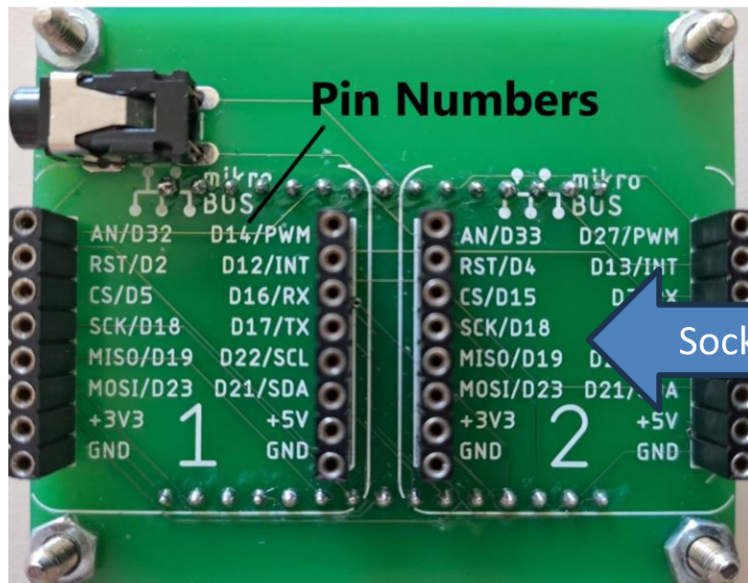# Digital Ports

Embedded Software

Wolfgang Neff

Assignment 1

- Controlling the internal LED
  - Please let the internal blue LED of your micro-controller blink.

Assignment 2

- Controlling an external LED
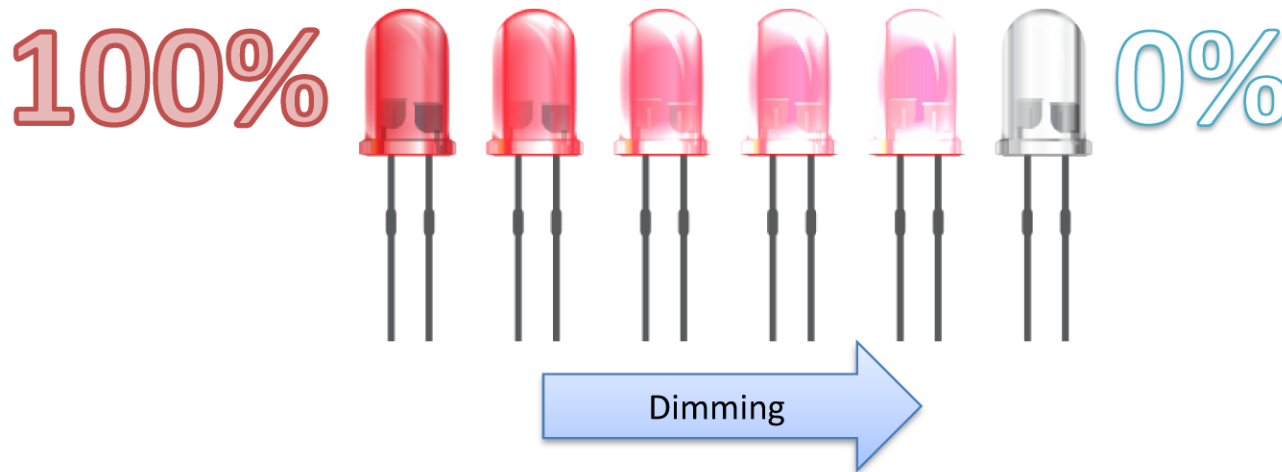 - Please let the green LED of the Color Click blink.

Assignment 3

- Controlling several LEDs
  - Please let the LEDs of the Color Click blink as follows:
    - The red LED blinks ten times with a frequency of 0.5 Hz.
    - The blue LED blinks 15 times with a frequency of 2 HZ.
    - The process starts again.
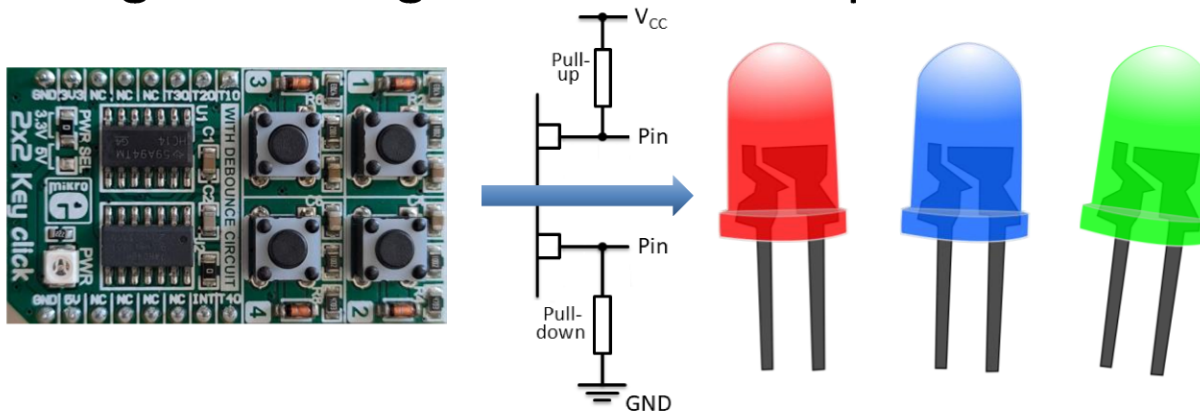   - The green LED does not glow.

0.5 Hz   2 Hz

Assignment 4

- Dimming a LED
  - Please dim the intensity of the red LED to 10%.
  - Do not consult the Internet. Think about it on the strength of what you learned so far.
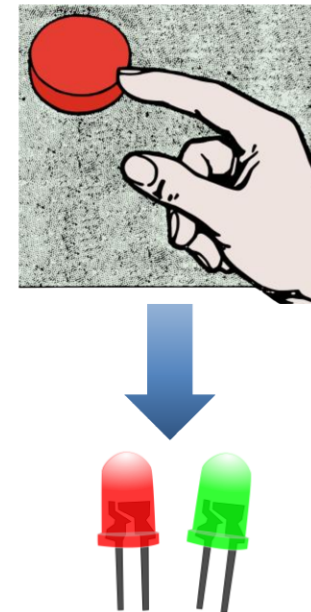
Assignment 5

- Controlling LEDs by means of push buttons
  - Please control the LEDs of the Color-Clicks by means of the 2x2 Key Click as follows:
    - The red LED glows while T1 is pressed.
    - The blue LED glows while T2 is pressed.
    - The green LED glows while T3 is pressed.

Assignment 6

- Selecting a LED by means of a push button
  - Please control the LEDs of the Color-Clicks by means of the 2x2 Key Click as follows:
    - T1 selects the red LED.
    - T2 selects the green LED.
    - T3 switches the **selected** LED on.
    - T4 switches the **selected** LED off.

Assignment 7

- ## Using a push button as switch

  - Please control the LEDs of the Color-Clicks by means of the 2x2 Key Click as follows:

    - T1 selects the red LED.

    - T2 selects the green LED.

    - T3 selects the blue LED.

    Control

    - T4 switches the **selected** LED on and off.

      - Fist press: the selected led gets switched on.

      - Second press: the selected led gets switched off.

      - And so on …